Results: MMSE score of empty-nest group was significantly lower than non-empty-nest group (P=0.002) only for males. Stepwise multiple regression equation analysis in males shows that age and fasting blood glucose (FBG) are independently associated with MMSE in both non-empty-nest (B=-0.166 P<0.001 for age and B=-0.78 P=0.013 for FBG) and empty-nest (B=-0.245 P<0.001 for age and B=-1.539 P=0.007 for FBG) group. However, in non-empty-nest females the age (B=-0.147 P<0.001), systolic blood pressure (SBP, B=-0.102 P=0.001), and diastolic blood pressure (DBP, B=0.117 P=0.003) were independently correlated with MMSE. In empty-nest females only the age (B=-0.168 P=0.005) and estimated glomerular filtration rate (eGFR, B=-0.028 P=0.019) were independently correlated with MMSE.
Conclusions: The cognition of empty-nest males was lower than non-empty males. There are gender differences of risk factors for cognition decline between empty-nest and not-empty-nest healthy China elderly population. Empty-nest females should pay more attention to faster aging-related decline of the cognition.

GW25-e2128

The changes of bone mineral density and atherosclerosis indexes with aging and estrogen levels in healthy women

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Objectives: Both the age and estrogen levels are risk factors of osteoporosis and atherosclerosis-related disease belong to the ordinary diseases of elderly in women. The aim of this study was to observe the changes of bone mineral density (BMD) and subbclinical atherosclerosis indexes with the increase of age in women and the level of estrogen in postmenopausal women in healthy population in China.
Methods: A total of 229 qualified healthy women who were screened from 1500 participants from fifteen communities in Shenyang between September 2007 and June 2008 were followed up in 2011 for their BMD, ankle-brachial index (ABI), pulse wave velocity (PWV), and carotid intima-media thickness (CIMT). The women were assigned into four groups according to ages and another four groups according to menopause. The estrogen were detected in 159 postmenopausal women and compared with BMD, ABI, PWV and CIMT.
Results: There were significant differences in total hip BMD among the women from different age groups and among those with menopause or not (P<0.01). Significant differences were found in lumbar spine BMD among women younger than 70 years and among those with menopause shorter than 20 years (P<0.01). There were significant differences in PWV among different age groups and the groups with menopause or not (P<0.01). In women the lumber BMD (r=-0.587, P<0.001) and total hip BMD (r=-0.575, P<0.001) were significantly correlated with age. In the postmenopausal women, the subclinical atherosclerosis index PWV (r=-0.250, P<0.01) and CIMT (r=-0.174, P=0.028) were significantly correlated with the level of estrogen. The lumber BMD (r=0.571, P<0.001) and total hip BMD (r=0.457, P<0.001) were significantly correlated with the level of estrogen.
Conclusions: The level of BMD and subclinical atherosclerosis index are related to the age. Furthermore, these indicators are also closely related to the level of estrogen in postmenopausal women.

GW25-e2304

Optimal waist to height ratio cutoffs for hypertension, diabetes, and dyslipidemia for the Han and Uighur adults in China

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Objectives: Optimal cutoffs for obesity indices are rarely studied in Asians. We evaluated these cutoffs for diabetes, hypertension, dyslipidemia and any risk factor for the Chinese Han and Uighur general population in Xinjiang Uighur Autonomous Region. We aimed to identify cutoffs for waist to height ratio (WHtR; in cm/cm) for categorization of obesity among Han and Uighur adults in Xinjiang.
Methods: In this cross-sectional study, 10260 Han and Uighur participants were selected from the Cardiovascular Risk Survey (CRS) which was carried out from Oct. 2007 to Mar. 2010. The age of the participants were from 35 to 101 years old with the mean age of 52.47 years in Han and 50.70 years in Uighur. Anthropometric data, blood pressure, serum total cholesterol, triglyceride, low density lipoprotein (LDL), high density lipoprotein (HDL) and fasting glucose were documented. The prevalence, sensitivity, specificity and distance on the receiver operating characteristic (ROC) curve of each WHtR values were calculated.
Results: The prevalence of hypertriglyceridemia was higher with higher WHtR for both men and women in Han population, the prevalence of diabetes and hypercholesterolemia appeared to be higher with higher WHtR in the Han women. The prevalence of hypertriglyceridemia was higher with higher WHtR for both men and women in Uighur population. In women, the prevalence of hypercholesterolemia appeared to be higher with higher WHtR in Uighur population. The shortest distance in the receiver operating characteristic curves for hypertension, dyslipidemia, diabetes, or ≥ 2 of these risk factors suggested a WHtR cutoff of 0.54 for both men and women in Han population and 0.55 in men and 0.57 in women among Uighur population.
Conclusions: The optimal WHtR cutoffs for hyperglycemia, hypertension and dyslipidemia for the Han population were 0.54, while higher cutoffs for WHtR were needed in the identification of Uighur patients at high risk of cardiovascular disease.

GW25-e3075

Ethnic Disparities in the Prevalence of Major Cardiovascular Risk Factors and Cardiovascular Diseases among Uygur, Han and Kazakh populations of Xinjiang: A Cross-Sectional Study

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Objectives: To describe prevalence of major CVD risk factors (hypercholesterolemia, hypertension, obesity, diabetes, and smoking) and CVD (coronary heart disease [CHD] and stroke) among these different ethnics in Xinjiang. And assess cross-sectional associations of CVD risk factors with CVD among these ethnic groups respectively.
Methods: Multicenter, population-based Cardiovascular Risk Survey study in Xinjiang including individuals of Uygur (n=4104), Han (n=4852), Kazak (n=3554) aged 18 to 74 years. Analyses involved 12510 participants with complete data enrolled between October 2007 and March 2010.
Results: Age-standardized prevalence of CVD risk factors varied among three different ethnics (all P<0.001) ; hypertension and obesity rates were highest among Kazak participants (for men, 58% and 24%; for women, 49% and 22%, respectively); hypercholesterolemia prevalence was highest among Han men (62%) and Uygur women (58%); smoking rate was highest among Han men (64%) and Kazak women (16%); diabetes prevalence among three ethnics men and women were all less than 10%. Overall, self-reported CHD and stroke prevalence were low (3.9% and 4.1% in men; 2.2% and 3.8% in women, respectively) and also varied among three ethnics (P<0.001). In multivariate-adjusted models, hypertension and diabetes were directly associated with CHD (odds ratios [ORs], 1.8 and 2.1) and stroke (ORs, 1.9 and 4.7) in Han participants. In Kazak, hypertension and smoking contributed to the risk for CHD (ORs, 1.8 and 1.9), but only hypertension for stroke (ORs, 9.4). In Uygur, hypertension and hypercholesterolemia were directly associated with both CHD (ORs, 1.4 and 1.7) and stroke (ORs, 2.5 and 2.7).
Conclusions: Ethnic groups living in Xinjiang had striking differences in prevalence of major CVD risk factors and CVD. Significantly, the contributions of major risk factors to CVD were also different in ethnic groups. Ethnic-specific strategies should be developed to prevent CVD in different ethnic groups.

GW25-e3354

Prehypertension increased the Risk of Coronary Heart Disease: A Meta-analysis

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Objectives: We had reported that prehypertension [blood pressure (BP) 120-139/80-89 mmHg] was associated with composite cardiovascular disease (CVD) and stroke risk. However, the effects of abnormal BP on coronary and cerebral arteries are not identical and the risk of coronary heart disease (CHD) associated with prehypertension is controversial. This meta-analysis sought to evaluate the risk of CHD associated with prehypertension, as well as its different subgroups.
Methods: The PubMed, EMBASE, and Cochrane Library databases and conference proceedings were searched for prospective cohort studies with data on prehypertension and risk of CHD. Two independent reviewers assessed the reports and extracted data. Prospective studies were included if they reported multivariate-adjusted relative risks (RRs) with 95% confidence interval (CIs) for the associations between CHD and prehypertension, or its two sub-ranges (low range prehypertension: 120-129/80-84 mmHg; high range prehypertension: 130-139/85-89 mmHg). We conducted subgroup analyses according to BP ranges, CHD endpoint, age, sex, ethnicity, and study characteristics.
Results: Pooled data included the results with 561, 664 participants from 17 prospective cohort studies. Prehypertension increased the risk of CHD (*RR*=1.43, 95% CI 1.26-1.63, *P<0.*001) compared with optimal BP (<120/80 mmHg). In the subgroup analyses, even low range prehypertension increased the risk of CHD (*RR*=1.27, 95% CI 1.07-1.50, *P*=0.007), and the risk trended to increase for high range prehypertension (*RR*=1.58, 95% CI 1.24-2.02, *P<0.*001). The difference between low range and high range prehypertension was not significant (*P*=0.15).
Conclusions: After adjusting for multiple cardiovascular risk factors, prehypertension is associated with increased risk of CHD. The risk is also increased in people with low range prehypertension.

GW25-e3364

MTHFR C677T gene mutation affect the level of plasma homocysteine but do not related to early renal damage in hypertensive patients

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Objectives: To investigate the possibility that the C677T polymorphism of methylenetetrahydrofolate reductase (MTHFR) gene may be an independent risk factor for